

ABSTRACT

Process for the plasma sterilization of at least one object, in which the object or objects (50) to be treated are placed in a treatment chamber (10) at substantially atmospheric pressure, one or more non-biocidal gas mixtures, at least one of which contains moisture, are introduced into this treatment chamber, a plasma, producing chemical species from one of the gas mixtures, is created by generating, by means of a high-voltage supply (38), an electrical discharge between a high-voltage electrode (36) and an earth electrode (40), these electrodes being placed in this treatment chamber, the chemical species of the plasma are carried away out of the inter-electrode region (30) to the surface of the object or objects (50) to be treated, and the gas residues resulting from the treatment are removed from the treatment chamber.

The moisture is introduced directly around the object to be treated or in the inter-electrode region. The gas mixture contains at least 10% oxygen and 10% nitrogen and preferably consists of ambient air. The relative humidity around the object to be treated is between 50% and 100%.

The present invention also relates to various devices for implementing this process, making it possible in particular to sterilize all types of medical objects.

Figure 2.